

**DIPLOMA IN MECHANICAL ENGINEERING
(DME)**

**Term-End Examination
December, 2012**

BME-061 : AUTOMOBILE ENGINEERING

Time : 2 Hours

Maximum Marks : 70

Note : *Answer any five questions. Q. No. 1 is compulsory.
Use of scientific calculator is permitted.*

1. Multiple choice questions. Choose the correct answer. 7x2=14
- (a) The remedy for reducing tyre wear :
- (i) Correct camber
 - (ii) Correct tyre pressure
 - (iii) Proper wheel alignment
 - (iv) all of the above
- (b) Steering is connected to :
- (i) Rear axles
 - (ii) Front axles
 - (iii) Stub axles
 - (iv) all the above

- (c) One of the disadvantages of Hydraulic Brakes :
- (i) Increased braking force
 - (ii) Simple in construction
 - (iii) Presence of air inside the tubings
 - (iv) Flexibility of brake linings
- (d) Velocity Ratio is given by _____ .
- (i) $\frac{\text{Speed of driven}}{\text{Speed of driver}}$
 - (ii) $\frac{\text{Speed of driver}}{\text{Speed of driven}}$
 - (iii) 1/speed of driver
 - (iv) 1/speed of driven
- (e) Scavenging is the process of _____ .
- (i) Cleaning the gear box
 - (ii) Cleaning the automobile
 - (iii) Cleaning the cylinder
 - (iv) all the above
- (f) Following component does not belong to Ignition system :
- (i) Spark plug
 - (ii) Distributor
 - (iii) Ignition coil
 - (iv) Alternator

- (g) Chasis consists of _____ .
- (i) Power train
 - (ii) Engine
 - (iii) Stearing systems
 - (iv) all the above
2. Explain the working of 4 stroke Diesel Engine. **14**
3. (a) Give classification of IC Engines. **7x2=14**
(b) Write down the differences between 2 stroke and 4 stroke engine.
4. Explain different parts of an IC Engine. **14**
5. Briefly explain the working principles of following electrical systems. **7x2=14**
- (a) Starter
 - (b) Dynamo
 - (c) Alternator and
 - (d) Regulators
6. What are the different types of gear boxes ? **14**
Explain any one of them.
7. Explain working of 'Ackerman' Steering gear **14**
mechanism.
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